

ABSTRACT

A glue gun (1) for melting a glue stick (2) comprises a heating device (3) which in turn comprises a main housing (4) having a combustion chamber (6) and a working body member (5) having a heating chamber (20) within which the glue stick (2) is melted. A gas catalytic combustion element (10) in the combustion chamber (6) converts fuel gas to heat for heating the main body member (4) for in turn melting the glue stick (2). Melted glue is dispensed through a dispensing nozzle (25). A cover (30) around the dispensing nozzle (25) forms a pair of exhaust gas passageways (33) on respective opposite sides of the dispensing nozzle (25) for conducting exhaust gases from an exhaust gas port (15) from the combustion chamber (6) to an exhaust gas outlet (34). Heat exchange fins (45, 46) form the passageway (33) into a circuitous tortuous passageway and transfer heat from the exhaust gases into the dispensing nozzle (25) for cooling the exhaust gases to a safe temperature.